

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Original): An image processing apparatus, comprising:

a land object rendering means for rendering a land object in a 3-dimension virtual space; and

a grid rendering means for rendering a grid on a surface of said land object,

said grid rendering means displaying said grid by combining a plurality of grid lines with each other in vertical and horizontal directions,

said grid including a plurality of sections sectioned by intersecting points of said grid lines in the vertical direction and in the horizontal direction, and

each of said plurality of grid lines being constructed by a series of grid line elements which are elements for forming said grid line in a plural number, wherein

said grid rendering means includes the number of elements determining means for making the number of the grid line elements included in each of said sections different depending upon a gradient of the surface of said land object at a position corresponding to each of said sections so that the grid lines of the vertical direction and the grid lines of

the horizontal direction can be displayed, and a flow rendering means for performing rendering as if said grid lines each formed by said grid line elements having the number determined by said number of elements determining means flow toward an inclined direction at a constant speed on the surface of said land object.

Claim 2 (Original): An image processing apparatus according to claim 1, further comprising:

a grid line element changing means for changing a length of said grid line element depending upon the number determined by said number of elements determining means, wherein

said flow rendering means performs rendering as if the grid lines each having the series of grid line elements changed in length by said grid line element changing means flow toward the inclined direction of the surface of said land object at a constant speed.

Claim 3 (Original): An image processing apparatus according to claim 1, wherein said grid line elements have visual directivity,

said flow rendering means performs rendering such that a front direction of said grid line elements becomes coincident with the inclined direction of the surface of said land object.

Claim 4 (Previously Presented): An image processing apparatus according to

claim 1, wherein said land object is a land object of a virtual golf course, and the invention further comprising an operating means for inputting operating information by a player, wherein

a virtual golf game is performed in said golf course in response to an operation of said operating means.

Claim 5 (Original): An image processing program executed by an image processing apparatus having a land object rendering means for rendering a land object in a 3-dimension virtual space and a grid rendering means for rendering a grid on a surface of said land object, said program making said grid rendering means execute

a displaying step for displaying said grid by combining a plurality of grid lines with each other in vertical and horizontal directions,

said grid including a plurality of sections sectioned by intersecting points of said grid lines of the vertical direction and said grid lines of the horizontal direction,

each of said plurality of grid lines being constructed by a series of grid line elements being elements for forming said grid line in a plural number,

the number of elements determining step for making the number of the grid line elements included in each of said sections different depending upon a gradient of the surface of said land object at a position corresponding to each of said sections so that said grid lines of the vertical direction and said grid lines of the horizontal direction can be displayed, and

a flow rendering step for performing rendering as if said grid lines each formed by said grid line elements having the number determined by said number of elements determining step flow toward an inclined direction at a constant speed on the surface of said land object.

Claim 6 (New): An image processing method comprising:
rendering grid lines on a surface of an object;
generating one or more moving grid line elements for each grid line,
wherein the number of grid line elements for each respective grid line is based on a gradient of a portion of the surface of the object on which the respective grid line is rendered and the grid line elements for all the grid lines have the same, constant moving speed.

Claim 7 (New): The image processing method according to claim 6, wherein the grid line elements each have a head section and a tail section.

Claim 8 (New): The image processing method according to claim 6, wherein the number of grid line elements increases as the gradient increases.

Claim 9 (New): The image processing method according to claim 6, wherein the number of grid line elements for each respective grid line is stored in a data table.

Claim 10 (New): The image processing method according to claim 6, wherein the one or more grid line elements for each grid line are generated from textures each comprising one or more grid line elements.

Claim 11 (New): The image processing method according to claim 10, wherein the moving of the grid line elements is effected by displacing offset positions of the textures every display frame.

Claim 12 (New): The image processing method according to claim 6, wherein the one or more grid line elements for each grid line are generated from a reference texture.

Claim 13 (New): A computer-readable medium having stored thereon an image processing program for execution by a processing system of an image processing apparatus, the image processing program comprising:

a rendering process for rendering grid lines on a surface of an object;

a grid line element generating process for generating one or more moving grid line elements for each grid line,

wherein the number of grid line elements for each respective grid line is based on a gradient of a portion of the surface of the object on which the respective grid line is

rendered and the grid line elements for all the grid lines have the same, constant moving speed.

Claim 14 (New): The image processing program according to claim 13, wherein the grid line elements each have a head section and a tail section.

Claim 15 (New): The image processing program according to claim 13, wherein the number of grid line elements increases as the gradient increases.

Claim 16 (New): The image processing program according to claim 13, wherein the number of grid line elements for each respective grid line is stored in a data table.

Claim 17 (New): The image processing program according to claim 13, wherein the grid line elements are parts of textures having lengths corresponding to the length of the grid lines.

Claim 18 (New): The image processing program according to claim 17, wherein the moving of the grid line elements is effected by displacing offset positions of the textures every display frame.

Claim 19 (New): The image processing method according to claim 13, wherein the one or more grid line elements for each grid line are generated from a reference texture.

Claim 20 (New): An image processing apparatus comprising:
means for rendering grid lines on a surface of an object; and
means for generating one or more moving grid line elements for each grid line,
wherein the number of grid line elements for each respective grid line is based on a gradient of a portion of the surface of the object on which the respective grid line is rendered and the grid line elements for all the grid lines have the same, constant moving speed.

Claim 21 (New): The image processing apparatus according to claim 20, wherein the grid line elements each have a head section and a tail section.

Claim 22 (New): The image processing apparatus according to claim 20, wherein the number of grid line elements increases as the gradient increases.

Claim 23 (New): The image processing apparatus according to claim 20, wherein the number of grid line elements for each respective grid line is stored in a data table.

Claim 24 (New): The image processing apparatus according to claim 20, wherein the grid line elements are parts of textures having lengths corresponding to the length of the grid lines.

Claim 25 (New): The image processing apparatus according to claim 24, wherein the moving of the grid line elements is effected by displacing offset positions of the textures every display frame.

Claim 26 (New): The image processing method according to claim 20, wherein the one or more grid line elements for each grid line are generated from a reference texture.